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SUPERSEDING
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PERFORMANCE SPECIFICATION

TRAINING DATA PRODUCTS

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This performance specification for training data products (See 6.5.38) establishes data requirements to support the life-cycle maintenance of training data products and is a source document for training (See 6.5.37) related Data Item Descriptions (DIDs). This specification may be used by contractors and the Government in establishing the training data requirements to be delivered.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Air Warfare Center Aircraft Division, Code 414100B120-3, Highway 547, Lakehurst, NJ 08733-5100, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 <u>Government documents</u>.

2.2.1 <u>Other Government documents, drawings, and publications</u>. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

DoD Data Architecture (DDA)

Defense Data Dictionary System (DDDS)

(The DDA and DDDS can be downloaded from http://www-datadmn.itsi.disa.mil. To register for an account, go to http://www-datadmn.itsi.disa.mil/tools.html click on DDDS Registration.)

High Level Architecture (HLA)

(The HLA can be downloaded from http://www.ntsc.navy.mil.)

Joint Technical Architecture (JTA)

(The JTA can be downloaded from http://www-jta.itsi.disa.mil.)

2.3 <u>Non-Government publications</u>. The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents, which are DoD adopted are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation.

Interactive Multimedia Association Recommended Practices for Interactive Courseware Portability (not Government adopted)

(Requests for copies should be addressed to the Interactive Multimedia Association, 48 Maryland Avenue (Suite 202), Annapolis, MD 21401-8011.)

Institute for Electrical and Electronic Engineers (IEEE) 1484.11, IMS Enterprise Interoperability Best Practices Guide

(Application for copies should be addressed to the Institute Of Electrical and Electronics Engineers 3 Park Ave, 17th Floor New York, NY 10016-5997.)

International Standards Organization (ISO) 9000, Quality Assurance, Supplement Z1.11, Education and Training

(Application for copies should be addressed to Global Engineering Documents, Customer Support, A105 15 Inverness Way, Englewood, CO 80112 and can also be accessed at http://www.iso.ch.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. The contractor shall use, to the maximum extent possible, all previously developed data that can be applied toward satisfying the data requirements of this specification. This includes Government furnished data and data developed by the contractor incident to other contractual requirements.

3.1.1 Front matter. The content of front matter (See 6.5.12) for specified training data products shall conform to Appendix A of this document, except for the Training Conduct Support Document.

3.2 Training data product performance requirements. The training data products shall support personnel performance requirements. The training data products shall provide the information necessary to support attainment of the physical and mental skills and attitudes required for mission accomplishment. The performance requirements associated with each training data product and its associated DID (See 6.3) are as follows:

3.2.1 Training situation document. This training data product shall provide specific data necessary to verify the efficiency of a training system (See 6.5.42) to meet existing training

needs, training programs survey results data, and analysis results information on technologies applicable to new training needs.

3.2.2 <u>Instructional performance requirements document</u>. This training data product shall provide specific personnel performance requirements data necessary to support the design of a training program.

3.2.3 <u>Instructional media requirements document</u>. This training data product shall provide specific data necessary for the development of instructional media (See 6.5.14).

3.2.4 <u>Instructional media design package</u>. This training data product shall provide baseline requirements data necessary for the development and production of courseware (See 6.5.7).

3.2.5 <u>Training program structure document</u>. This training data product shall provide information necessary for the acquisition of resources for the conduct of training. It shall also provide information necessary for training implementation management.

3.2.6 <u>Course conduct information package</u>. This training data product shall provide data required by the Government for outsourcing (See 6.5.24) the conduct of training. This product shall provide sufficient information for an accurate evaluation of a student's (See 6.5.33) capabilities to meet all learning objectives of a course (See 6.5.4) and shall identify prerequisite (See 6.5.25) knowledge and skills (See 6.5.30) of students entering the course. This product shall inform students of the training syllabus, organization, operation, scheduling, and other pertinent information. This product shall also provide information on an evaluation of a trainee's (See 6.5.36) performance, the trainee evaluation of training, and shall provide the trainee with a certificate of training.

3.2.7 <u>Training conduct support document</u>. This training data product shall provide definition and direction for instructors and trainees for the conduct of formal training. This product also supports the trainee's mastery of knowledge, skills, and attitudes for a given subject.

3.2.8 <u>Training evaluation document</u>. This training data product shall provide specific requirements data necessary to determine the effectiveness and Return On Investment (ROI) of training.

3.2.9 <u>Test package</u>. This training data product shall provide specific data necessary for the examination of an individual's or unit's knowledge, skills, attitudes, and achievement of learning objectives (See 6.5.19) or performance standards.

3.2.10 <u>Instructional media package</u>. This training data product shall provide specific data necessary to support the transfer of knowledge, skills, and attitudes by use of instructional media.

3.2.11 <u>Training system support document</u>. This training data product shall provide specific data necessary for the operation and life-cycle software configuration management of a training system.

3.2.12 <u>Standard digital data</u>. Standard digital data (See 6.5.32) shall contain recorded source information necessary to support the development of training data products. It shall provide the basis for training program life-cycle configuration management and control functions. Standard digital data shall be electronically transferable and re-usable among Services, industry, platforms, and programs. Standard digital data shall contain digital data file table relationships and data table attributes that conform to the requirements specified in the DoD Data Architecture (DDA) (See 6.5.11) and the Defense Data Dictionary System (DDDS) (See 6.5.10).

4. VERIFICATION

4.1 <u>Classifications of inspections</u>. This specification provides two types of verification (Type A and Type B), which can be used for the verification of training data products. Acceptable evaluation criteria values shall be as specified in the contract. The inspection requirements specified herein are classified as follows:

a. Training data product accuracy and completeness verification procedures (See 4.2.1).
b. Training data product life-cycle maintenance verification procedures (See 4.2.2).

4.2 <u>Training data product accuracy verification</u>. Verification Types A and B, listed below, shall be used to verify the accuracy, completeness, and life-cycle maintenance capability of each training data product as specified in the contract. Each verification type involves two steps: 1) examine the product to determine the percentage of accuracy and, 2) evaluate the results of the examination conducted in step one to determine that the evaluation criteria values specified in the contract are met. Examine and evaluate – these words are used throughout this section and are to be viewed as separate but related steps of the verification process. The quantity of training data to be examined and the evaluation criteria values (stated as a percentage or as pass/fail) shall be as specified in the contract. Equipment hazard, personnel safety, and environmental related data shall be examined for 100% accuracy. The evaluation will be a review of the examination results and a determination as to whether the training data product meets, exceeds, or fails to meet the evaluation criteria values (stated as a percentage or pass/fail) as stated in the contract. The Government maintains the right to re-examine data to ensure its integrity. Verification requirements and the criteria for determining performance are as follows:

4.2.1 <u>Training data product accuracy and completeness verification procedures (Type A)</u>.
Examination and evaluation of the data contained in the training data product shall verify
accuracy and completeness as follows:

a. Step 1: Examinations shall confirm traceability of the training data to the mission and
   design parameters. Examinations shall determine a percentage of accuracy for the data
   that was examined. The quantity of training data to be examined for completeness, scope
   of coverage, comprehensiveness, clarity, logical sequence, accuracy, and references shall
   be as specified in the contract.
b. Step 2: Evaluations shall validate the integrity of the data. Evaluations shall determine if
   the results of the examination meet contract requirements. Results of the examinations
   shall be evaluated during progress reviews, acceptance inspections, course trials (See
   6.5.6), and small group trials (See 6.5.31) as specified in the contract.

4.2.2 <u>Training data product life-cycle maintenance verification procedures (Type B)</u>.
Examination and evaluation of the data contained in the training data product shall verify data
life-cycle maintenance capability (See 6.5.23) as follows:

a. Step 1: Examinations shall confirm that an audit trail exists among the training data
   product, other training data products, and the mission/system configuration.
   Examinations shall determine a percentage of accuracy for the data that was examined.
   The quantity of data to be examined for the existence of an audit trail, shall be as
   specified in the contract.
b. Step 2: Evaluations shall validate the integrity of the audit trail. Evaluations shall
   determine if the results of the examination meet contract requirements. Results of the
   examinations shall be evaluated during progress reviews, acceptance inspections, course
   trials, and small group trials, as specified in the contract.

4.2.3 <u>Training data product performance requirements/verification criteria cross-reference</u>.
Table I provides a cross-reference between the Section 3 performance requirements paragraph
and the corresponding Section 4 verification criteria paragraph for each training data product.

TABLE I. Performance requirements/verification criteria cross-reference.

TRAINING DATA PRODUCT	MIL-PRF-29612 Performance Requirements	MIL-PRF-29612 Verification Criteria
Training situation document	3.2.1	4.3.1
Instructional performance requirements document	3.2.2	4.3.2
Instructional media requirements document	3.2.3	4.3.3
Instructional media design package	3.2.4	4.3.4

Training program structure document	3.2.5	4.3.5
Course conduct information package	3.2.6	4.3.6
Training conduct support document	3.2.7	4.3.7
Training evaluation document	3.2.8	4.3.8
Test package	3.2.9	4.3.9
Instructional media package	3.2.10	4.3.10
Training system support document	3.2.11	4.3.11
Standard digital data	3.2.12	4.3.12

4.3 Data product performance verification. Specific examination and evaluation requirements for each of the training data products are as follows:

4.3.1 Training situation document. The following verification procedures shall be performed for the training situation document:

4.3.1.1 Training situation document - Type A. Examinations and evaluations shall be performed as follows:

a. Examine the data that describes the existing training situation to determine that it is sufficient to support the conduct of a situation analysis. Evaluate the data using a pass/fail method as specified in the contract.
b. Examine the training situation analysis data to determine that the impact statements provide an accurate description of the specific resource deficiencies or excesses caused by the situation. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
c. Examine the training situation analysis data to determine that the recommendations support the most cost effective alternative. Evaluate the data using a pass/fail method as specified in the contract.
d. Examine the training technology assessment data to determine if similar systems that were analyzed had features applicable to the new training requirement. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
e. Examine the training technology assessment data to determine if the simulation and instructional features list provides the optimal mix of training equipment (See 6.5.39) required to support the training under study. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
f. Examine the training situation data to determine that the situations/events/occurrence(s) are correctly matched to the resources affected. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the analytical methods and procedures data to determine that the process to be used supports identification of system requirements. Evaluate the data using a pass/fail method as specified in the contract.

h. Examine the data used as sources of information to determine that the sources support the identification of solutions and alternatives. Evaluate the data using a pass/fail method as specified in the contract.

i. Examine the solutions and alternatives data to determine that it will support identification of a cost effective recommendation. Evaluate the data using a pass/fail method as specified in the contract.

j. Examine the data contained in the appendices to determine it is in sufficient detail to complement the training situation analysis data. Evaluate the data using a pass/fail method as specified in the contract.

k. Examine the commonality analysis data to determine traceability to the associated training and training equipment. Evaluate the data using a pass/fail method as specified in the contract.

l. Examine the state-of-the-art assessment data to determine that the capabilities identified are applicable to the training requirement. Evaluate the data using a pass/fail method as specified in the contract.

m. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

n. Examine the ROI data to determine that the up-front investment costs are traceable to elements identified in the recommended solutions to the training situation, and that all cost factors (equipment, personnel, training time, etc.) are considered. Evaluate the data using a pass/fail method as specified in the contract.

o. Examine the System Requirements Document to determine that the recommended training system design identifies equipment with High Level Architecture (HLA) (See 6.5.13) requirements capability. Evaluate the data using a pass/fail method as specified in the contract.

4.3.2 <u>Instructional performance requirements document</u>. The following verification procedures shall be performed for the instructional performance requirements document:

4.3.2.1 <u>Instructional performance requirements document - Type A</u>. Examinations and evaluations shall be performed as follows:

a. Examine the document to determine whether training program design parameters are traceable to specific program mission elements to be supported by the training. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the performance data concerning collective and individual task (See 6.5.35) statements, performance measures and levels, and affected occupational skill areas to determine their relationship with personnel performance requirements. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

c. Examine the learning objectives to determine that each describes the behavior, condition, and standard required to support the related task performance. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

d. Examine the task descriptions to determine that each describes a single unit of specific work behavior with clear beginning and ending points, and is directly observable or otherwise measurable. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

e. Examine the task difficulty level, conditions, and standards of the learning objectives, and the learning (See 6.5.17) difficulty required to identify student target population (See 6.5.34) prerequisites to determine the data accuracy and completeness. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

f. Examine the learning objectives data to determine if the learning objectives, learning types, instructional methodologies, learning hierarchies, and instructional setting support the minimum learning requirements for personnel performance. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the training course mission, recommended course length, and class size data to determine the supportability of student throughput requirements. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

h. Examine the data concerning media to determine if learning objectives are supported by the recommended materials. Evaluate the data using a pass/fail method as specified in the contract.

i. Examine the learning objectives hierarchies data and flow diagrams to determine that they will support the development of a cost effective course of instruction. Evaluate the data using a pass/fail method as specified in the contract.

j. Examine the learning objectives data to ensure the strategy for combining, sequencing, and presenting learning objectives will support course development. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

k. Examine the learning objectives data to determine:

  (1)   Traceability of the learning objective to the particular task that it supports.
  (2)   Adequacy of the learning objectives for developing lesson (See 6.5.20) materials.

Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

l. Examine the Personnel Performance Profile (PPP) item number to determine if it reflects the correct knowledge and skill category. Evaluate the data using a pass/fail method as specified in the contract.

4.3.2.2 Instructional performance requirements document - Type B. Examinations and evaluations shall be performed as follows:

a. Examine the training task selection criteria to determine that the data will support identification of tasks that require training. Evaluate the data using a pass/fail method as specified in the contract.
b. Examine the task titles to determine that they are representative of the task descriptions. Evaluate the data using a pass/fail method as specified in the contract.
c. Examine the training data matrix to determine that the tasks are associated with the correct system/subsystem/equipment level. Evaluate the data using a pass/fail method as specified in the contract.
d. Examine the task information summary and clarification data to determine that the tasks are properly qualified. Evaluate the data using a pass/fail method as specified in the contract.
e. Examine the training task data to determine that it provides sufficient detail to develop learning objectives which will support the design of training courses. Evaluate the data using a pass/fail method as specified in the contract.
f. Examine the learning objective data to determine that it will support the training requirement. Evaluate the data using a pass/fail method as specified in the contract.
g. Examine the knowledge, skills, and attitudes data to determine that it will support development of learning objectives and course design. Evaluate the data using a pass/fail method as specified in the contract.
h. Examine Mission Performance Standards (MPS) data to determine that it supports evaluating personnel capability to perform a mission. Evaluate the data using a pass/fail method as specified in the contract.
i. Examine the Individual Training Standards (ITS) data to determine that it will support development and/or maintenance of occupational field management documentation. Evaluate the data using a pass/fail method as specified in the contract.
j. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.
k. Examine the quantity of data relating to the audit trail among performance tasks, learning objectives, and media as specified in the contract. Evaluate the results of the examinations during acceptance inspections and course trials to verify data life-cycle maintenance capability as specified in the contract. Evaluate the level of accuracy

determined during the examination against the required percentage of accuracy as specified in the contract.

4.3.3 Instructional media requirements document. The following verification procedures shall be performed for the instructional media requirements document:

4.3.3.1 Instructional media requirements document - Type A. Examinations and evaluations shall be performed as follows:

a. Examine the media selection model data to determine its capability to support the identification of cost effective media for the specified training requirement. Evaluate the data using a pass/fail method as specified in the contract.
b. Examine the instructional media requirements document to determine whether the instructional media delivery system recommendations are traceable to specific mission elements. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
c. Examine the cost effectiveness and alternative analysis study results to determine that results are accurately reflected in the recommendations for primary and alternate instructional media delivery systems. Evaluate the data using a pass/fail method as specified in the contract.
d. Examine the data concerning alternatives to determine whether each alternative considered will support the training requirement. Evaluate the data using a pass/fail method as specified in the contract.
e. Examine the sensory stimulus (See 6.5.28) requirements to determine their accuracy and completeness for supporting each of the specified learning objectives. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
f. Examine the recommended instructional media delivery system data to determine the capability to support the learning objective stimulus requirements. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
g. Examine the instructional media delivery system functional characteristics data to determine the traceability to the sensory stimulus requirement. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
h. Examine the functional characteristics data to determine whether the characteristics are stated in performance terms. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
i. Examine the training system modification data to determine that all training deficiencies are satisfied. Evaluate the data using a pass/fail method as specified in the contract.

j. Examine the media selection analysis data to determine that the primary and alternate methods and media support the instructional media requirements. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

k. Examine the Pre-Planned Product Improvement data to determine that the plan for the training system upgrade is supportable. Evaluate the data using a pass/fail method as specified in the contract.

l. Examine the training systems support considerations data to determine that the concepts, goals, and constraints that will control the design of media are supportable. Evaluate the data using a pass/fail method as specified in the contract.

m. Examine the data contained in the appendices to determine it is in sufficient detail to complement the instructional media requirements document. Evaluate the data using a pass/fail method as specified in the contract.

n. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

o. Examine the functional characteristics data to determine whether Joint Service interoperability is to be achieved using HLA and JTA specifications. Evaluate the data using a pass/fail method as specified in the contract.

p. Examine the media selection analysis data to determine the requirements for capability to support courseware object interoperability across platforms and systems, reusability, and Internet protocol compatibility have been considered. Evaluate the data using a pass/fail method as specified in the contract.

q. Examine media selection analysis data to determine the requirements for capability for operating the course using various Learning Management Systems (LMS) (See 6.5.18) have been considered. Evaluate the data using a pass/fail method as specified in the contract.

4.3.4 Instructional media design package. The following verification procedures shall be performed for the instructional media design package:

4.3.4.1 Instructional media design package - Type A. Examinations and evaluations shall be performed as follows:

a. Examine the summary description of the training program data to determine if resources required to operate the instructional media package can be provided by the Government. Evaluate the data using a pass/fail method as specified in the contract.

b. Examine the courseware design strategy to determine that all critical elements have been addressed. Evaluate the data using a pass/fail method as specified in the contract.

c. Examine the lesson strategy to determine its ability to support the development of lessons. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

d. Examine the lesson strategy and resulting prototype lesson to determine if the prototype lesson conforms to the lesson format guide (See 6.5.21). Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

e. Examine the lesson design strategies for traceability to the applicable learning objective, and the scope of lesson strategies for appropriateness to the related task learning difficulty. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

f. Examine the lesson strategy for traceability to the courseware development process. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

g. Examine the remediation design criteria (See 6.5.27) and branching design criteria (See 6.5.2) to determine whether they allow for differences in learning processes. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

h. Examine the performance tracking control features to ensure sufficient features are included to obtain all information necessary for student tracking and progress reporting. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

i. Examine the courseware logic flow diagrams (See 6.5.9) to determine that the diagrams contain sufficient data to support the development of courseware. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

j. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

k. Examine the description of Sharable Content Objects (SCO) (See 6.5.29) specifications and metadata tagging requirements to determine that it contains data necessary to support courseware object interoperability across platforms and systems, reusability, and Internet protocol compatibility. Evaluate the data using a pass/fail method as specified in the contract.

l. Examine the description of the level of granularity and the rationale to determine that the granularity to be applied supports re-use of the data within the lesson.

m. Examine the list of the metadata tags required for each SCO in final deliverable format (i.e., compressed or uncompressed) to determine whether the proposed metadata tags are complete and accurate and are sufficient to produce SCOs of an element of the course or lesson. Evaluate the data using a pass/fail method as specified in the contract.

n. Examine the list of the metadata tags required for each original uncompressed format media object to determine whether the proposed metadata tags are complete and accurate and are sufficient to produce SCOs. Evaluate the data using a pass/fail method as specified in the contract.

4.3.4.2 <u>Instructional media design package - Type B</u>. Examinations and evaluations shall be performed as follows:

a. Examine the lesson design data to determine the requirements for SCOs comply with IEEE 1484.11, ISO 9000 Z1.11, applicable Advanced Transmission Systems Committee (ATSC), and Moving Pictures Experts Group (MPEG) specifications, and metadata tagging requirements. These specifications must support courseware object interoperability, reusability, and Internet protocol compatibility across platforms and systems. Evaluate the data using a pass/fail method as specified in the contract.
b. Examine courseware design strategy to determine if the Course Structure Format (CSF) hierarchy, sub-structure, sequencing, global properties, SCOs, external references, and metadata tagging conventions reflect capability for operating the course using the specific LMS. Evaluate the data using a pass/fail method as specified in the contract.

4.3.5 <u>Training program structure document</u>. The following verification procedures shall be performed for the training program structure document:

4.3.5.1 <u>Training program structure document - Type A</u>. Examinations and evaluations shall be performed as follows:

a. Examine the training planning data to determine that the training needs and training strategies support mission requirements by course, training program, and Service component for peacetime and mobilization. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
b. Examine the training planning data (including justification and impact) to determine that it is traceable to mission needs and training requirements. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
c. Examine training planning data concerning the milestone schedules to determine whether proposed milestone schedules support the parent program schedules. Evaluate the data using a pass/fail method as specified in the contract.
d. Examine the training planning resource requirements and availability data to determine traceability to course data and milestone schedules. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

e. Examine the training course data to determine whether it will support management of development and the conduct of training. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

4.3.5.2 Training program structure document - Type B. Examinations and evaluations shall be performed as follows:

a. Examine the quantity of data relating to the audit trail among mission needs, training requirements, course data, and resource requirements as specified in the contract. Evaluate the results of the examinations during acceptance inspections and course trials to verify data life-cycle maintenance capability as specified in the contract. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

c. Examine the SCO data to determine the applicable metadata tags support courseware object interoperability, reusability, and Internet protocol compatibility across the specified platforms and systems. Evaluate the data using a pass/fail method as specified in the contract.

d. Examine the CSF hierarchy, sub-structure, sequencing, global properties, SCOs, external references, and metadata tagging conventions and values to determine the capability for operating the course using the specified LMS. Evaluate the data using a pass/fail method as specified in the contract.

4.3.6 Course conduct information package. The following verification procedures shall be performed for the course conduct information package.

4.3.6.1 Course conduct information package - Type A. Examinations and evaluations shall be performed as follows:

a. Examine the trainee orientation guidance data to determine that it contains all information required to introduce the student to all aspects of the training course. This includes examination of data related to the organization conducting the training, for both resident and Advanced Distributed Learning (ADL) environments. Evaluate the data using a pass/fail method as specified in the contract.

b. Examine the training course standards data to determine that student prerequisite skills have been identified. Evaluate the data using a pass/fail method as specified in the contract.

c. Examine the training course standards data to determine that sufficient information is provided to measure a graduate student's capability to meet the terminal learning

objectives and enabling learning objectives. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

d. Examine training course standards data to determine that terminal learning objectives and enabling learning objectives meet the training requirement. Evaluate the data using a pass/fail method as specified in the contract.

e. Examine the trainee materials data (student handouts) to determine that all information necessary to support the student's achievement of the terminal learning objectives and enabling learning objectives is included. The evaluation shall consist of a small group trial method as specified in the contract. Evaluate the data using a pass/fail method as specified in the contract.

f. Examine the trainee and training course completion data to determine that all requirements were addressed. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the trainee and training course completion data to determine that the instructor was properly prepared to conduct the course, that the time allocated and training method used for each lesson was satisfactory, and that each student achieved the course objectives. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

h. Examine the trainee and training course completion data to determine that a course completion certificate has been prepared for each student who successfully completed the course. Evaluate the data using a pass/fail method as specified in the contract.

i. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

4.3.6.2 Course conduct information package - Type B. Examinations and evaluations shall be performed as follows:

a. Examine the quantity of data relating to the audit trail among the course objectives, terminal learning objectives, and enabling learning objectives as specified in the contract. Evaluate the results of the examinations during acceptance inspections and course trials to verify data life-cycle maintenance capability as specified in the contract. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the data contained in the appendices to determine it is in sufficient detail to identify all equipment and publications applicable to the course. Evaluate the data using a pass/fail method as specified in the contract.

4.3.7 Training conduct support document. The following verification procedures shall be performed for the training conduct support document:

4.3.7.1 <u>Training conduct support document - Type A</u>. Examinations and evaluations shall be performed as follows:

a. Examine the document to determine that the front matter content requirements have been accurately documented and logically sequenced to reflect program design and training applicability parameters. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
b. Examine the lesson plan (See 6.5.22) data to determine that required definition and direction exists for the instructor to promote the effective, efficient transfer of knowledge, skills, and attitudes. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
c. Examine data contained in individual lessons to determine accuracy and completeness of content. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract. The examination of data, required to prepare the instructor to conduct the lesson, shall include the following:

(1) The traceability of the learning objective to training task.
(2) The traceability of the lesson topic to course objective.
(3) The traceability of the lesson topic to learning objective.
(4) Classroom -vs.- laboratory ratio for skill type learning objectives.
(5) The traceability of the learner activity (See 6.5.16) data to the enabling learning objective.
(6) Hierarchical sequencing (simplest to most complex) of discussion points within lessons.

d. Examine the trainee guide to determine the correlation of data between the lesson plan data and trainee guide data. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
e. Examine the On-the-Job Training (OJT) Handbook data to determine traceability to the training requirement. Evaluate the data using a pass/fail method as specified in the contract.
f. Examine the OJT Handbook to ensure it supports independent student learning. Evaluate the data using a pass/fail method as specified in the contract.
g. Examine the display quality of the visual aids to determine they enhance the learning process. Evaluate the display quality of the visual aids using a pass/fail method as specified in the contract.
h. Examine the training materials (See 6.5.40) change data to determine the completeness of the change package compared to the basis for the change requirement. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

4.3.7.2 <u>Training conduct support document - Type B</u>. Examinations and evaluations shall be performed as follows:

a. Examine the quantity of data relating to the audit trail among tasks, learning objectives, lessons, topics, training equipment, and media as specified in the contract. Evaluate the results of the examinations during acceptance inspections and course trials to verify data life-cycle maintenance capability as specified in the contract. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
b. Examine the lesson plan administrative data to determine that effective course configuration management controls are established. Evaluate the data using a pass/fail method as specified in the contract.

4.3.8 <u>Training evaluation document</u>. The following verification procedures shall be performed for the training evaluation document:

4.3.8.1 <u>Training evaluation document - Type A</u>. Examinations and evaluations shall be performed as follows:

a. Examine the training evaluation planning data to determine whether the data will support a complete evaluation of the specified training element. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
b. Examine the training evaluation results data to determine its applicability and data points are appropriate to support evaluation of the specified training element. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
c. Examine the training evaluation summary of findings to determine that they are based on data collected. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
d. Examine the training evaluation conclusions and recommendations to determine if they are complete and commensurate with the data and the findings. Evaluate the conclusions and recommendations using a pass/fail method applied to each conclusion and recommendation.
e. Examine the instructional delivery system test and evaluation data to determine that operationally critical issues reflect mission essential elements of the specific instructional delivery system. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

f. Examine the data contained in the appendices to determine it is in sufficient detail to complement the training evaluation document. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

h. Examine the training evaluation planning data to determine whether the procedures to be used for data analysis to determine cost effectiveness and Return On Investment (ROI) are complete and accurate. Evaluate the data using a pass/fail method as specified in the contract.

4.3.9 Test package. The following verification procedures shall be performed for the test package:

4.3.9.1 Test package - Type A. Examinations and evaluations shall be performed as follows:

a. Examine the test items to determine that they are sufficient to measure a student's achievement of the related learning objectives. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine test items to determine whether each learning objective has been evaluated sufficiently to support variations in tests. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

c. Examine the test item answers to determine that the data is traceable to the supporting reference and that the answers are correct. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

d. Examine the instructions to the examinee to determine that all guidance to be followed while taking the test is complete, pertinent, and necessary. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

e. Examine the tests to determine if safety considerations have been addressed. Evaluate the data using a pass/fail method as specified in the contract.

f. Examine the testing schedule in the testing plan to determine that the knowledge and performance tests are scheduled at logical intervals. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the testing plan to determine that the review, remediation, and retesting procedures will provide adequate opportunity for students to achieve the learning objectives. Evaluate the data using a pass/fail method as specified in the contract.

h. Examine the test administration data to determine that the answers in the test answer sheet are traceable to supporting documentation. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

i. Examine the test administration data to determine that the test answer keys and/or scoring templates are traceable to the test answer sheets. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

j. Examine the test administration data to determine that the computer-based grade computation strategy is correct. Evaluate the data using a pass/fail method as specified in the contract.

k. Examine the cross-reference chart to determine whether the relationships among test item, lesson topic, learning objective, training task, and job task are correct. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

l. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

m. Examine the testing procedures for Web-based testing to ensure the security and protection of tests, test items, and student responses. Evaluate the data using a pass/fail method as specified in the contract.

n. Examine the types of tests and rationale to determine that the test type chosen supports the measurement of student characteristics and performance. Evaluate the data using a pass/fail method as specified in the contract.

o. Examine the grading method and rationale to determine if it supports the assignment of value to student performance and the purpose of the test. Evaluate the data using a pass/fail method as specified in the contract.

p. Examine the capability and structure of test and test items metadata that support SCOs, CSF, and LMS to determine interoperability. Evaluate the data using a pass/fail method as specified in the contract.

4.3.9.2 <u>Test package - Type B</u>. Examinations and evaluations shall be performed as follows:

a. Examine the quantity of data relating to the audit trail showing the relationships among learning objectives, test questions, and tests as specified in the contract. Evaluate the results of the examinations during acceptance inspections and course trials to verify data life-cycle maintenance capability as specified in the contract. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the tests to determine that all specific requirements are addressed. Evaluate the data using a pass/fail method as specified in the contract.

c. Examine the test administration materials to determine that they will support testing. Evaluate the data using a pass/fail method as specified in the contract.

4.3.10 Instructional media package. The following verification procedures shall be performed for the instructional media package:

4.3.10.1 Instructional media package - Type A. Examinations and evaluations shall be performed as follows:

a. Examine the instructional media package data to determine that the audiovisual script scene numbers are traceable to the storyboard. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the instructional media package data to determine that the audiovisual script's supporting audio script includes a description of the synchronization with the video action. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

c. Examine the audio only script data to determine traceability to the instructional media. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

d. Examine the instructional media package data to determine that the program media is supportable with planned resources (hardware). Evaluate the data using a pass/fail method as specified in the contract.

e. Examine the instructional media package data to determine that the courseware data files will run unmodified, as designed, on the specified media delivery system with the run-time programs. Evaluate the data using a pass/fail method as specified in the contract.

f. Examine the instructional media package data to determine its portability capability. This examination shall consist of operating the multimedia-training product on a variety of hardware as specified in the contract. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the instructional media package data to determine that the courseware provides stimulus and response cues which support the learning objectives. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

h. Examine the instructional media package data to determine that there are no royalties, recurring licensing or run-time fees, use tax, or similar additional payments for associated presentation programs necessary to interpret and execute the courseware, documentation, or associated training materials. Evaluate the data using a pass/fail method as specified in the contract.

i. Examine the legal data to determine that all clearances, releases, and other legal data are included. Evaluate the data using a pass/fail method as specified in the contract.

j. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

k. Examine the general plan or approach to the production (treatment) to determine that it supports the learning objectives. Evaluate the data using a pass/fail method as specified in the contract.

l. Examine the audio scene data to determine that it provides all the data required for audio production. Evaluate the data using a pass/fail method as specified in the contract.

m. Examine the programming requirements data for graphics and animation to determine that it will support development of media data files. Evaluate the data using a pass/fail method as specified in the contract.

n. Examine the components of the training portal (See 6.5.41) (i.e., LMS, Course Management System (CMS) (See 6.5.5), courseware development/authoring tools (See 6.5.8), communications tools (See 6.5.3), and reference resources (See 6.5.26)) to determine that they are compatible with each other and will provide a training portal robust enough to satisfy the training need. Evaluate the data using a pass/fail method as specified in the contract.

o. Examine the courseware by exercising it in its intended environment and infrastructure and determine whether the intended learning transfer occurs and learning objectives are achieved. Evaluate the data using a pass/fail method as specified in the contract.

p. Examine the security requirements for Web-based training to determine whether they will protect student and administrative data, and that countermeasures are in place to protect against viruses, malicious code, and prohibited mobile codes. Evaluate the data using a pass/fail method as specified in the contract.

q. Examine the computer-generated audio and video media files to determine that the media complies with the Joint Technical Architecture (JTA) (See 6.5.15) and will perform within the user's available bandwidth. Evaluate the data using a pass/fail method as specified in the contract.

4.3.10.2 <u>Instructional media package - Type B</u>. Examine the quantity of data as specified in the contract. Evaluate the results of the examinations during acceptance inspections and course trials to verify data life-cycle maintenance capability as specified in the contract. Examinations and evaluations shall be performed as follows:

a. Examine the instructional media package data to determine that an audit trail exists showing the relationships among scripts, storyboards, lecture guides, and data files. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the instructional media package data to determine that the instructional media programs contain all software applications necessary for life-cycle maintenance of the instructional media. Evaluate the data using a pass/fail method as specified in the contract.

c. Examine the script data to determine that it supports production of instructional presentations. Evaluate the data using a pass/fail method as specified in the contract.

d. Examine the storyboard data to determine that it provides directions and information necessary for the production of instructional media. Evaluate the data using a pass/fail method as specified in the contract.

e. Examine the video shot list data to determine that all motion and still frame shots required are listed and in sequential order. Evaluate the data using a pass/fail method as specified in the contract.

f. Examine the audiovisual production plan data to determine that it provides information and coordination required for the production of video. Evaluate the data using a pass/fail method as specified in the contract.

g. Examine the Edit Decision List (EDL) data to determine that it contains the direction necessary to produce premaster or master video. Evaluate the data using a pass/fail method as specified in the contract.

h. Examine the adjunctive material to determine that it enhances the training provided by the primary media. Evaluate the data using a pass/fail method as specified in the contract.

i. Examine the instructional media data files to determine that all files required for life cycle support are included. Evaluate the data using a pass/fail method as specified in the contract.

j. Examine the transportability and maintainability data to determine that the information provided will support operation, configuration management, and life cycle maintenance of the courseware. Evaluate the data using a pass/fail method as specified in the contract.

k. Examine the Interactive Multimedia Instruction (IMI) directions to determine that it contains the required information and directions necessary for producing IMI. Evaluate the data using a pass/fail method as specified in the contract.

l. Examine the SCO data to determine the IEEE 1484.11, ISO 9000 Z1.11, applicable ATSC and MPEG specifications, and metadata tags support courseware object interoperability, reusability, and Internet protocol compatibility across platforms and systems. Evaluate the data using a pass/fail method as specified in the contract.

m. Examine the CSF hierarchy, sub-structure, sequencing, global properties, SCOs, external references, and metadata tagging conventions to determine the capability for operating the course using the specified LMS. Evaluate the data using a pass/fail method as specified in the contract.

4.3.11 Training system support document. The following verification procedures shall be performed for the training system support document:

4.3.11.1 <u>Training system support document - Type A</u>. Examinations and evaluations shall be performed as follows:

a. Examine the trainer software application data to determine whether the step-by-step directions for software utilities will accomplish the procedures. Evaluate the data using a pass/fail method as specified in the contract.
b. Examine the trainer software application data to determine whether the step-by-step directions for file generation will accomplish the procedures. Evaluate the data using a pass/fail method as specified in the contract.
c. Examine the software description and flow diagrams to determine that they depict the functional relationships of the modules and the interfaces between modules. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
d. Examine the training system operating data to determine that the configuration and performance characteristics are traceable to the learning objectives. Evaluate the data using a pass/fail method as specified in the contract.
e. Examine the training system operating data to determine that the functional description of the training system instructor controls and displays are keyed to a picture of the actual equipment and depict the status of normal operation as well as the malfunction of a particular system or equipment. Evaluate the data using a pass/fail method as specified in the contract.
f. Examine the training system operating data to determine that the list of daily readiness checks is provided with instructions for set-up and running, as well as a method for diagnosing the results. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
g. Examine the training system operating data to determine that all emergency procedures have been adequately addressed. Evaluate the data using a pass/fail method as specified in the contract.
h. Examine the training system operating procedures data to determine their adequacy. This examination will consist of using the operating procedures to operate the training system. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
i. Examine the training exercises to determine that each exercise is traceable to the learning objective. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.
j. Examine the trainer software application data to determine that it contains complete procedures for utilization of all software utility programs, support software file generation, and system, performance characteristics verification. Evaluate the data using a pass/fail method as specified in the contract.

k. Examine the training system operating data to determine that it contains all information necessary to support full utilization of a training system. Evaluate the data using a pass/fail method as specified in the contract.

l. Examine the content of the front matter to determine that it conforms to the requirements of MIL-PRF-29612 Appendix A. Evaluate the data using a pass/fail method as specified in the contract.

4.3.12 <u>Standard digital data</u>. When standard digital data is procured for the production and life cycle maintenance of instructional materials, it will be necessary to conduct examinations and evaluations that relate to the instructional materials desired. These criteria are contained in paragraphs 4.3.1.1 through 4.3.11.1 and should be performed for the materials produced from standard digital data. The following verification procedures shall be performed for the raw standard digital data:

4.3.12.1 <u>Standard digital data - Type A</u>. Examinations and evaluations shall be performed as follows:

a. Examine the standard digital data file table relationships to determine compliance with the DDA. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

b. Examine the standard digital data file field structure to determine conformance with attributes contained in the DDDS. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

c. Examine the standard digital data records to determine the accuracy and completeness of information content. Evaluate the level of accuracy determined during the examination against the required percentage of accuracy as specified in the contract.

d. Examine the standard digital data to determine its operational capability to run on the intended government system(s) that are DDA and DDDS compliant. Evaluate the data using a pass/fail method as specified in the contract.

5. PACKAGING

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (See 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department or Defense Agency's automated packaging files, Compact Disk-Read Only Memory (CD-ROM) products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 <u>Intended use</u>. This specification is intended to be used in the acquisition of training data products.

6.2 <u>Acquisition requirements</u>. Acquisition documents must specify the following:

a. Title, number, and date of the specification.
b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (See 2.2).
c. Packaging requirements (See 5.1).
d. The type of verification (Type A, Type B, or both) required (See 4.2).
e. Which verification examinations and evaluations will be required. Include any additional or alternate verification criteria (See Section 4).
f. Quantity of training data to be examined and evaluated during verification. (See Section 4).
g. Data product performance verification criteria values (percentage or pass/fail) (See Section 4). Equipment hazard, personnel safety, and environmental related data will be examined for 100% accuracy (See 4.2).
h. How and when the verifications will be performed (e.g., progress reviews, acceptance inspections, course trials, small group trials) (See Section 4).
i. The activity (contractor or Government) that will perform the verification examination (See Section 4).
j. The activity (contractor or Government) that will perform the verification evaluation (See Section 4).
k. Activity or program specific format requirements for training data products.

6.3 <u>Associated Data Item Descriptions (DIDs)</u>. This specification is cited in DoD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), as the source document for the following DIDs. When it is necessary to obtain the data, the applicable DIDs must be listed on the Contract Data Requirements List (DD Form 1423), except where the DoD Federal Acquisition Regulations Supplement exempts the requirement for a DD Form 1423.

DID Number	DID Title
DI-SESS-81517B	Training Situation Document
DI-SESS-81518B	Instructional Performance Requirements Document
DI-SESS-81519B	Instructional Media Requirements Document
DI-SESS-81520B	Instructional Media Design Package

DI-SESS-81521B   Training Program Structure Document
DI-SESS-81522B   Course Conduct Information Package
DI-SESS-81523B   Training Conduct Support Document
DI-SESS-81524B   Training Evaluation Document
DI-SESS-81525B   Test Package
DI-SESS-81526B   Instructional Media Package
DI-SESS-81527B   Training System Support Document

The above DIDs were current as of the date of this specification. The current issue of the AMSDL must be researched to ensure that only current and approved DIDs are cited on the DD Form 1423.

6.4 <u>Tailoring guidance</u>. Tailoring is the process by which individual requirements (sections, paragraphs, or sentences) of specifications, standards, and related documents are modified to ensure an optimal balance between operational needs and cost. Tailoring specifications may involve the deletion of requirements and/or the identification of alternate or additional verification requirements. This data product specification is written and structured so that referenced documents, requirements, and verification provisions can be readily tailored to suit different applications. The contractor should only provide data to the level of detail specified in the contract and DIDs. The life-cycle support data requirements for the training program should be provided by the Government in the contract. Each training program is unique, therefore, this specification must be tailored to include the minimum data necessary to provide life-cycle training program conduct and maintenance support. Proper tailoring of requirements is vital to a sound, cost effective, and supportable training program. Preparers of solicitations and contracts should tailor the requirements of Sections 3 and 4 of this specification to ensure proper application. Detailed tailoring guidance is provided in MIL-HDBK-29612-1, Department of Defense Handbook, Guidance for Acquisition of Training Data Products and Services (Part 1 of 5 Parts).

6.5 <u>Definitions</u>. Acronyms and definitions for terms used in this document are provided below. Additional acronyms and definitions for training terms are provided in MIL-HDBK-29612-4.

6.5.1 <u>Acronyms used in this specification</u>:

ACRONYM   **LONG TITLE**

ADL   Advanced Distributed Learning
AMSDL   Acquisition Management Systems and Data Requirements Control List
ATSC   Advanced Transmission Systems Committee
CD-ROM   Compact Disk-Read Only Memory
CMS   Course Management System

ACRONYM	**LONG TITLE**
CSF	Course Structure Format
DDA	DoD Data Architecture
DDDS	Defense Data Dictionary System
DDDS	Defense Data Model
DID	Data Item Description
DoDISS	Department of Defense Index of Specifications and Standards
EDL	Edit Decision List
FDAd	Functional Data Administrator
HLA	High Level Architecture
IEC	International Engineering Consortium
IEEE	Institute for Electrical and Electronic Engineers
IMI	Interactive Multimedia Instruction
ISO	International Standards Organization
ITS	Individual Training Standards
JTA	Joint Technical Architecture
LMS	Learning Management System
MPEG	Moving Pictures Experts Group
MPS	Mission Performance Standards
NISPOM	National Industrial Security Program Operating Manual
OJT	On-the-Job Training
PPP	Personnel Performance Profile
RDBMS	Relational Database Management System
ROI	Return On Investment
SCO	Sharable Content Object
SDD	Standard Digital Data
SDE	Standard Data Element

6.5.2 <u>Branching design criteria</u>. Previously determined paths developed by the designer and influenced by the user's input. Branching is intended to allow for differences in students learning processes.

6.5.3 <u>Communications tools (both synchronous and asynchronous)</u>. Tools that are used to enable instructor-to-student and student-to-student interaction through several media (i.e., video, audio, text, Internet) and face-to-face conversations. Communication tools can be utilized in both synchronous and asynchronous environments.

6.5.4 <u>Course</u>. A complete integrated series of lessons which are identified by a common title and/or number.

6.5.5 <u>Course Management Systems (CMS)</u>. A CMS provides the direct interaction between the student and the courseware and is the presentation interface for the course. The CMS supports launching, tracking, and feedback procedures within a computer-based instruction course.

6.5.6 <u>Course trials</u>. A full-length course conducted in a target environment (facilities, instructors and students) using the curriculum and supporting training material prepared for that course. Its purpose is to "shake down" or "validate" the curriculum and materials in a classroom situation to determine their effectiveness in attaining the approved learning objectives or training goals.

6.5.7 <u>Courseware</u>. An actual instructional package (including content and technique).

6.5.8 <u>Courseware development/authoring tools</u>. Tools that provide a means of developing course content and maintaining that content. These tools are able to integrate courses developed with different authoring tools through a conversion process by templates with emphasis on the capability of customizing, defining, and storing additional templates.

6.5.9 <u>Courseware logic flow diagram</u>. A graphic representation of actions/events required in accomplishment of the presentation of a course.

6.5.10 <u>Defense Data Dictionary System (DDDS)</u>. The DoD repository which contains approved, developmental, and candidate Standard Data Elements (SDE). For each SDE there is information provided that includes a definition of the SDE, the field type structure (e.g., numeric, alpha, alpha-numeric), field size (how many characters are allowed), and other required data. The DDDS allows for the development, approval, and maintenance of standardized metadata for DoD. Standardized metadata provides a structure for re-use of data across Relational Database Management Systems (RDBMS).

6.5.11 <u>DoD Data Architecture (DDA)</u>. The DDA, formerly known as the Defense Data Model (DDM), portrays DoD data standards grouped in Functional Views that are designed by Functional Data Administrators (FDAd) and aligned by functional area (rather than Subject Areas as they were in the DDM). The Functional Views are then divided into Functional Sub-Views generally containing fifty (50) entities or less. The DDA provides a "map" of DoD Standard Data Elements (SDE). The DDA shows the interrelationships among the SDEs that are listed in the Defense Data Dictionary System (DDDS).

6.5.12 <u>Front matter</u>. Data required at the beginning of a document to provide purpose, identification, foreword, and other data not included in the body of the document.

6.5.13 <u>High Level Architecture (HLA)</u>. A general purpose architecture for simulation reuse and interoperability. The HLA is based on the premise that no simulation can satisfy all uses and users. An individual simulation or set of simulations developed for one purpose can be applied to another application under the HLA concept of a composable set of interacting simulations.

6.5.14 <u>Instructional media</u>. The means used to present information to a trainee to induce learning.

6.5.15 <u>Joint Technical Architecture (JTA)</u>. The JTA provides the foundation for interoperability among all tactical, strategic, and sustaining base systems. The JTA is an evolving set of elements consisting of service areas, interfaces, and standards that satisfy the DoD's technical architecture requirements. The JTA implements standards reform by selecting the minimum standards necessary to achieve joint interoperability. The JTA mandates commercial standards and practices to the maximum extent possible. Use of JTA-mandated standards or specifications in acquisition solicitations will not require a waiver from standards reform policies. All mandatory standards in the JTA are of the types that have been identified by the DoD Standards Reform as waiver-free or for which an exemption has already been obtained. The standards selection criteria used throughout the JTA focus on mandating only those items critical to interoperability that are based primarily on commercial open-system technology, are implementable, and have strong support in the commercial marketplace. The standards cited in the JTA may include commercial, Federal, and military standards and specifications, and various other kinds of authoritative documents and publications.

6.5.16 <u>Learner activity</u>. Student response to an instructional activity.

6.5.17 <u>Learning</u>. The act, process, or experience, of gaining knowledge or skill. The result of learning is a change in the behavior of the student. The behavior can be physical and overt, intellectual, attitudinal, or a combination of these types of behavior.

6.5.18 <u>Learning Management System (LMS)</u>. The LMS provides management of curriculum, course(s), and student data of an organization. The LMS also provides student and instructor interaction with all instructional elements of a Web or network-based (i.e., Internet, intranet, and extranet) courses. An LMS provides curriculum management for both resident and distributed learning. The primary high-level functions of an LMS include launching a course, student registration, report generation, scheduling, data gathering, and processing of student performance data.

6.5.19 <u>Learning objective</u>. A statement of the behavior or performance expected of a trainee as a result of a learning experience, expressed in terms of the behavior, the conditions under which it is to be exhibited, and the standards to which it will be performed or demonstrated.

6.5.20 <u>Lesson</u>. A segment of instruction that contains one or more learning objectives, information to be imparted to the student, and may contain an evaluation instrument. The lesson is designed in detail and is the basic building block of all training.

6.5.21 <u>Lesson format guide</u>. An organized outline of a single lesson that serves as a blueprint for the development of all lessons within a course.

6.5.22 <u>Lesson plan</u>. A plan for instruction that provides specific definition and direction to the instructor on learning objectives, equipment, instructional media material requirements, and conduct of the training. Lesson plans are the principal component of curriculum materials in that they sequence the presentation of learning stimuli and coordinate the use of supporting instructional material.

6.5.23 <u>Life-cycle maintenance capability</u>. The ability to update, modify, and otherwise change training materials and/or equipment after delivery.

6.5.24 <u>Outsourcing</u>. Contracting for goods and services required to conduct training.

6.5.25 <u>Prerequisite</u>. A requirement the trainee must possess before being able to attend a training course or lesson.

6.5.26 <u>Reference resources</u>. Library and reference links included on a training portal in addition to the primary training links to the electronic classrooms, electronic forums, e-mail, etc.

6.5.27 <u>Remediation design criteria</u>. Previously determined paths developed by the designer and influenced by the user's input. The remediation is intended to re-teach information the trainee has failed to understand. It may also be supplemental instruction to correct student non-understanding of course material or a student learning deficiency.

6.5.28 <u>Sensory stimulus</u>. An action, agent, or condition that activates/stimulates a human sense (e.g., hearing, sight, smell, equilibrium, etc.).

6.5.29 <u>Sharable Content Object (SCO)</u>. SCOs are self-contained pieces of instructional material that can be individually selected from a repository for reuse as a building block of instruction during training and education development.

6.5.30 <u>Skill</u>. The ability to perform an activity that contributes to the effective completion of a task.

6.5.31 <u>Small group trial</u>. Tryout of a training course on a representative sample of the student target population to gather data on the effectiveness of instruction in regard to error rates, criterion test performance, and time to complete the course.

6.5.32 <u>Standard Digital Data (SDD)</u>. Information presented in a format that conforms to the data standards contained in the DoD Data Architecture (DDA) and the Defense Data Dictionary System (DDDS).

6.5.33 <u>Student.</u> An individual, who has been placed in a learning situation, in order to acquire skills, knowledge, and attitudes. Also called "learner" and "trainee".

6.5.34 <u>Student target population</u>. The audience for which training presentation is directed, or the audience for which training materials are designed.

6.5.35 <u>Task</u>. A single unit of specific work behavior, with clear beginning and ending points, that is directly observable or otherwise measurable. A task is performed for its own sake, that is, it is not dependent upon other tasks, although it may fall in a sequence with other tasks in a mission, duty, or job.

6.5.36 <u>Trainee</u>. Identical to the definition for "student".

6.5.37 <u>Training</u>. Instruction and applied exercises for the attainment and retention of knowledge, skills, and attitudes.

6.5.38 <u>Training data product</u>. Contains information related to the analysis, design, development, presentation, evaluation, or the life-cycle maintenance of training, regardless of it's form or physical characteristics.

6.5.39 <u>Training equipment</u>. Items used in the support of training, such as trainers, operational equipment, and other associated hardware.

6.5.40 <u>Training materials</u>. A general term covering plans, control documents, lesson guides, student guides, and other non-hardware training products.

6.5.41 <u>Training portal</u>. Locations on the Web that serve as a gateway or entry point to central sources for education and training information and instructional content. Training portals serve as a guide to find information for instructional development or specific training and education needs.

6.5.42 <u>Training system</u>. An integrated combination of all elements (e.g., training material and equipment, personnel and support) necessary to conduct training.

6.6 <u>Subject term (key word) listing</u>.

Advanced Distributed Learning (ADL)
Course
Courseware
Evaluation
Examination
Instructional
Interactive Multimedia Instruction (IMI)
Learning Objective
Lesson
Media
Sharable Content Object
Standard Digital Data (SDD)
Test

MIL-PRF-29612B

APPENDIX A

FRONT MATTER CONTENT REQUIREMENTS FOR TRAINING DATA PRODUCTS

A.1 SCOPE

A.1.1 <u>Scope</u>. The front matter content requirements for training data products are included here to eliminate the need to repeat the requirements in each applicable DID.

A.1.2 <u>Application</u>. This appendix is intended for application to training data products. This appendix is a mandatory part of the specification. The information contained herein is intended for compliance as specified in the contract.

A.2 APPLICABLE DOCUMENTS (This section does not apply to this appendix.)

A.3 FRONT MATTER CONTENT FOR TRAINING DATA PRODUCTS

A.3.1 <u>Front matter</u>. Portions of the following data requirements are subject to deletion tailoring dependent on the program requirements:

a. Cover to include:

   (1)   Document title.
   (2)   Date of preparation.
   (3)   The security classification marking shall be in accordance with the National Industrial Security Program Operating Manual (NISPOM), DoD 5220.22-M.

b. List of effective pages.
c. Letter of promulgation.
d. Change record.
e. Hazard awareness notice.
f. Foreword/preface.
g. Definitions.
h. Table of contents.
i. List of illustrations.
j. List of tables.
k. A description of the application of the training data product shall consist of:

   (1)   Composition.
   (2)   Function.
   (3)   Use.

(4) Assignments.
(5) Equipment requirements.
(6) Instruction sheets.
(7) Test requirements.
(8) Division of materials into functional parts.

l. Executive summary.

CONCLUDING MATERIAL

Custodians: Preparing Activity:
    Army -AV   Navy - AS
    Navy - AS   (Project: SESS-0014)
    Air Force -94
    Marine Corps - MC
    DLA - DH

Review Activities:
    Army - TM
    Navy - SH, EC, TD
    Air Force - 11
    NSA - NS
    DLA - CC, GS, IS, DP

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.

2. The submitter of this form must complete blocks 4, 5, 6, and 7, and send to preparing activity.

3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	**1. DOCUMENT NUMBER**
	   MIL-PRF-29612B
		2. DOCUMENT DATE (*YYYYMMDD*)
		   20010831

3. DOCUMENT TITLE
   TRAINING DATA PRODUCTS

4. NATURE OF CHANGE (*Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.*)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (*Last, First, Middle Initial*)	b. ORGANIZATION	
c. ADDRESS (*Include ZIP Code*)	d. TELEPHONE (*Include Area Code*) (1) Commercial (2) DSN (*If applicable*)	**7. DATE SUBMITTED** (*YYYYMMDD*)

8. PREPARING ACTIVITY

a. NAME
   COMMANDER
   NAVAL AIR WARFARE CENTER
   AIRCRAFT DIVISION
	b. TELEPHONE (*Include Area Code*)
	(1) Commercial (2) DSN
	   (732) 323-2947 624-2947

c. ADDRESS (*Include ZIP Code*)
   CODE 414100B120-3
   HIGHWAY 547
   LAKEHURST, NJ 08733-5100
	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:
	   Defense Standardization Program Office (DLSC-LM)
	   8725 John J. Kingman Road, Suite 2533
	   Fort Belvoir, Virginia 22060-6221
	   Telephone (703) 767-6888 DSN 427-6888

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